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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.        | CONFIRMATION NO.       |
|--|-------------|----------------------|----------------------------|------------------------|
| 10/734,016   | 12/10/2003  | Ahmed El-Shimi       | 13768.783.90               | 1842                   |
| 47973 7590 11/20/2007<br>WORKMAN NYDEGGER/MICROSOFT<br>1000 EAGLE GATE TOWER<br>60 EAST SOUTH TEMPLE<br>SALT LAKE CITY, UT 84111 |             |                      | EXAMINER<br>DAO, THUY CHAN |                        |
|  |             |                      | ART UNIT<br>2192           | PAPER NUMBER           |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/734,016

Applicant(s)

EL-SHIMI ET AL.

Examiner

Thuy Dao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-36, 41 and 42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-36, 41 and 42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is responsive to the amendment filed on September 12, 2007.
2. Claims 1-10, 12-36, and 41-42 have been examined.

### **Response to Amendments**

3. Per Applicants' request, claims 1, 6-10, and 30 have been amended.
4. The objection to the abstract and claim 9 is withdrawn in view of Applicants' amendments.

### **Response to Arguments**

5. Applicants' arguments have been carefully considered. In view of Applicants' amendments, the 35 USC 102(e) rejection over claims 1, 9-10, and 36 in view of Desai (US Patent No. 6,968,291) has been withdrawn.

With respect to the 35 USC 102(e) rejection over pending claims 1-10, 12-36, and 41-42 in view of Hartmann, Applicants' arguments are not persuasive. After further consideration, the examiner notes that Hartman also teaches the newly added limitations as set forth in details below.

### **Claim Objections**

6. Claim 1 is objected to because of minor informalities. Claim 1 is the first claim in the set, has 8 dependent claims (claims 2-9), but refers to limitations in independent claim 10 "...when executed, perform the method of claim 10." (claim 1, line 4). To provide antecedent basis for subsequent dependent claims 2-9, claim 1 should spell out all claimed limitations.

Appropriate correction is required.

### **Claim Rejections – 35 USC § 102**

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-10, 12-36, and 41-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Hartmann (art of record, US Patent No. 6,505,342).

**Claim 1:**

Claim 1 is a computer system version, which recites the same limitations as those of claim 10, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of claim 10, it also teaches all of the limitations of claim 1.

**Claim 2:**

The rejection of claim 1 is incorporated. Hartmann also discloses *a database for storing the information about the instrumentation of the software components* (e.g., col.8; 42 – col.9: 46).

**Claim 3:**

The rejection of claim 1 is incorporated. Hartmann also discloses *a database for storing the health model* (e.g., col.30: 1-53).

**Claim 4:**

The rejection of claim 1 is incorporated. Hartmann also discloses *the health model comprises a state diagram with a transition from one state to another state for a group of instrumentation* (e.g., FIG. 3, col.5: 32 – col.6: 17).

**Claim 5:**

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The rejection of claim 1 is incorporated. Hartmann also discloses *the instrumentation collector comprises a spreadsheet for manual entry of information about instrumentation of software components* (e.g., col.13: 28-67).

**Claim 6:**

The rejection of claim 1 is incorporated. Hartmann also discloses *the creating an inventory comprises a parser automatically parsing a software component to extract information about instrumentation of the software component* (e.g., col.30: 27-36).

**Claim 7:**

The rejection of claim 3 is incorporated. Hartmann also discloses *the database also stores the instrumentation information used to generate the health model* (e.g., col.12: 4-21).

**Claim 8:**

The rejection of claim 1 is incorporated. Hartmann also discloses *generating the health model comprises an application that generating a state diagram* (e.g., col.5: 32 – col.6: 17).

**Claim 9:**

The rejection of claim 1 is incorporated. Hartmann also discloses *the computer-executable instructions comprise a plurality of modules* (e.g., col.5: 32 – col.6: 17).

**Claim 10:**

Hartmann discloses a computer system, a computer storage medium, and a *method for building a health model of a software component* (FIG. 1, 4, 6, 17 and related text), *comprising the steps of:*

*creating an inventory of instrumentation of the software component (e.g., col.6: 63 – col.7: 30; col.8: 42 – col.9: 46; col.7: 50 – col.8: 23);*

*mapping each individual instrumentation in the inventory of instrumentation to a state of operation of the software component before the instrumentation is generated (e.g., FIG. 6, col.11: 32-60, A with state s1 and B with state s2 before the instrumentations associated with  $s1 \rightarrow t1$  and  $s2 \rightarrow t2$  are generated; col.6: 63 – col.7: 30; col.8: 52 – col.9: 26);*

*mapping each individual instrumentation in the inventory of instrumentation to a state of operation of the software after the instrumentation is generated (e.g., FIG. 6, col.11: 32 – col.12: 21, after generating instrumentations associated with  $A(s1 \rightarrow t1)$  and  $B(s2 \rightarrow t2)$ , mapping them to item 606 “Equal Event?” and item 607 “Resulting transitions and states” in columns 7-9);*

*analyzing the inventory to identify instrumentation that result in the same transition (e.g., FIG. 6, col.12: 4-63, item 606, column 7 “Equal Event? YES/NO” or “IGNORED”, i.e., either YES or NO is accepted; Groups 3-7 with the same resulting transitions)*

*from one state of operation of the software component to another state of operation of the software component (e.g., FIG. 6, col.11: 32-60, from A(state s1) and B(state S2) to a resulting states in item 607, columns 8 and 9);*

*grouping the identified instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component (e.g., FIG. 6, grouping “Equal Event? YES/NO/IGNORED” and grouping “Resulting transitions and states” to 7 groups in column 1, item Group 609, col.12: 4 – col. 13: 27)*

*by filtering the instrumentation based upon the sate of the operation of the software component before instrumentation was generated and the state of operation after the instrumentation was generated (e.g., FIG. 6, col.11: 61 – col.12: 21, item Combination Number at column 2, filtering and reducing the instrumentation into combination numbers such as 1, 4, 8, 16, 32, which has a sum number 128; filtering and reducing to 7 groups in column 1, item Group 609); and*

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*generating the health model using the states of operation and at least one transition representing a group of instrumentation from one state of operation of the software component to another state of operation of the software component (e.g., FIG. 6, generating the health model as Decision Table 600 using at least states s1/s2, transitions (s1 → t1)/(s2 → t2), and associated instrumentations, col.11: 31 – col.13: 27).*

**Claim 12:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of creating an inventory of instrumentation of the software component comprises parsing the software component to extract information about instrumentation of the software component (e.g., col.30; 27-36).*

**Claim 13:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of determining states of operation of the software component (e.g., col.11: 32-60).*

**Claim 14:**

The rejection of claim 13 is incorporated. Hartmann also discloses *the step of determining states of operation of the software component comprises determining a stopped state (e.g., col.12: 4-21).*

**Claim 15:**

The rejection of claim 13 is incorporated. Hartmann also discloses *the step of determining states of operation of the software component comprises determining a running state (e.g., col.5: 32 – col.6: 17).*

**Claim 16:**

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The rejection of claim 13 is incorporated. Hartmann also discloses *the step of determining states of operation of the software component comprises determining a failed state* (e.g., col.12: 4-9).

**Claim 17:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of adding instrumentation where there is none to indicate an occurrence of a transition from a failed state of operation to a running state of operation* (e.g., FIG. 11, col.19: 8-54).

**Claim 18:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of adding instrumentation where there is none to indicate an occurrence of a transition from a running state of operation to a failed state of operation* (e.g., col.21: 48 – col.22: 64).

**Claim 19:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of persistently storing the inventory of instrumentation* (e.g., col.8: 42 – col.9: 46).

**Claim 20:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of persistently storing the generated health model* (e.g., col.30: 1-53).

**Claim 21:**

The rejection of claim 10 is incorporated. Hartmann also discloses *revising the instrumentation of the software component* (e.g., col.7: 61 – col.8: 23).

**Claim 22:**



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The rejection of claim 21 is incorporated. Hartmann also discloses *updating the health model using the revised instrumentation* (e.g., col.8: 52 – col.9: 26).

**Claim 23:**

The rejection of claim 22 is incorporated. Hartmann also discloses *generating a new health model* (e.g., col.11: 61 – col.12: 58).

**Claim 24:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of receiving an inventory of instrumentation comprises receiving an inventory of one or more events* (e.g., col.5: 32 – col.6: 17).

**Claim 25:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of receiving an inventory of instrumentation comprises receiving an inventory of one or more performance counters* (e.g., col.12: 4-21).

**Claim 26:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of receiving an inventory of instrumentation comprises receiving an inventory of one or more error messages* (e.g., col.19: 8-54).

**Claim 27:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of receiving an inventory of instrumentation comprises parsing the software component to extract information about instrumentation of the software component* (e.g., col.30: 27-36).

**Claim 28:**

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The rejection of claim 10 is incorporated. Hartmann also discloses *the step of receiving an inventory of instrumentation comprises manually entering instrumentation information in a spreadsheet application (e.g., col.13: 28-67).*

**Claim 29:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of analyzing the inventory comprises determining the state of operation before an instrumentation event occurs and the state of operation after the instrumentation event occurs (e.g., col.12: 4-21).*

**Claim 30:**

The rejection of claim 10 is incorporated. Hartmann also discloses *storing the health model and the instrumentation used to generate the health model in a database (e.g., col.11: 32-60).*

**Claim 31:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of analyzing the inventory to group instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component comprises labeling each group of instrumentation as a single transition action from one state of operation of the software component to another state of operation of the software component (e.g., col.11: 61 – col.12: 58).*

**Claim 32:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of analyzing the inventory to group instrumentation that result in the same transition from one state of operation of the software component to another state of operation of the software component comprises using an application to analyze the inventory to group instrumentation that result in the same transition from one state of operation of*

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*the software component to another state of operation of the software component (e.g., col.6: 63 – col.7: 30).*

**Claim 33:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the step of analyzing the inventory comprises determining a component to blame for instrumentation indicating a failure of the software component (e.g., col.19: 8-54).*

**Claim 34:**

The rejection of claim 26 is incorporated. Hartmann also discloses *the step of generating the health model comprises generating a state diagram (e.g., col.5: 32 – col.6: 17).*

**Claim 35:**

The rejection of claim 1 is incorporated. Hartmann also discloses *the step of generating a state diagram comprises using an application to generate the state diagram (e.g., col.12: 4-21).*

**Claim 36:**

Claim 36 is a computer storage medium version, which recites the same limitations as those of claim 10, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 36.

**Claim 41:**

The rejection of claim 10 is incorporated. Hartmann also discloses *the health model is configured to detect cycles of change in states of operation (e.g., col.5: 32 – col.6: 17).*

**Claim 42:**

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The rejection of claim 41 is incorporated. Hartmann also discloses *at least one of the cycles of change in states of operation comprises a cycle of failure and recovery* (e.g., col.12: 4-9).

### Conclusion

9. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone is (571) 272 8570. The examiner can normally be reached on every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

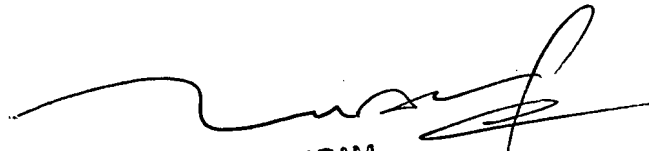
Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. Dao



TUAN DAM  
SUPERVISORY PATENT EXAMINER